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ST World

THE LEADING CURRENT NEWS SOURCE FOR THE ATARI ST

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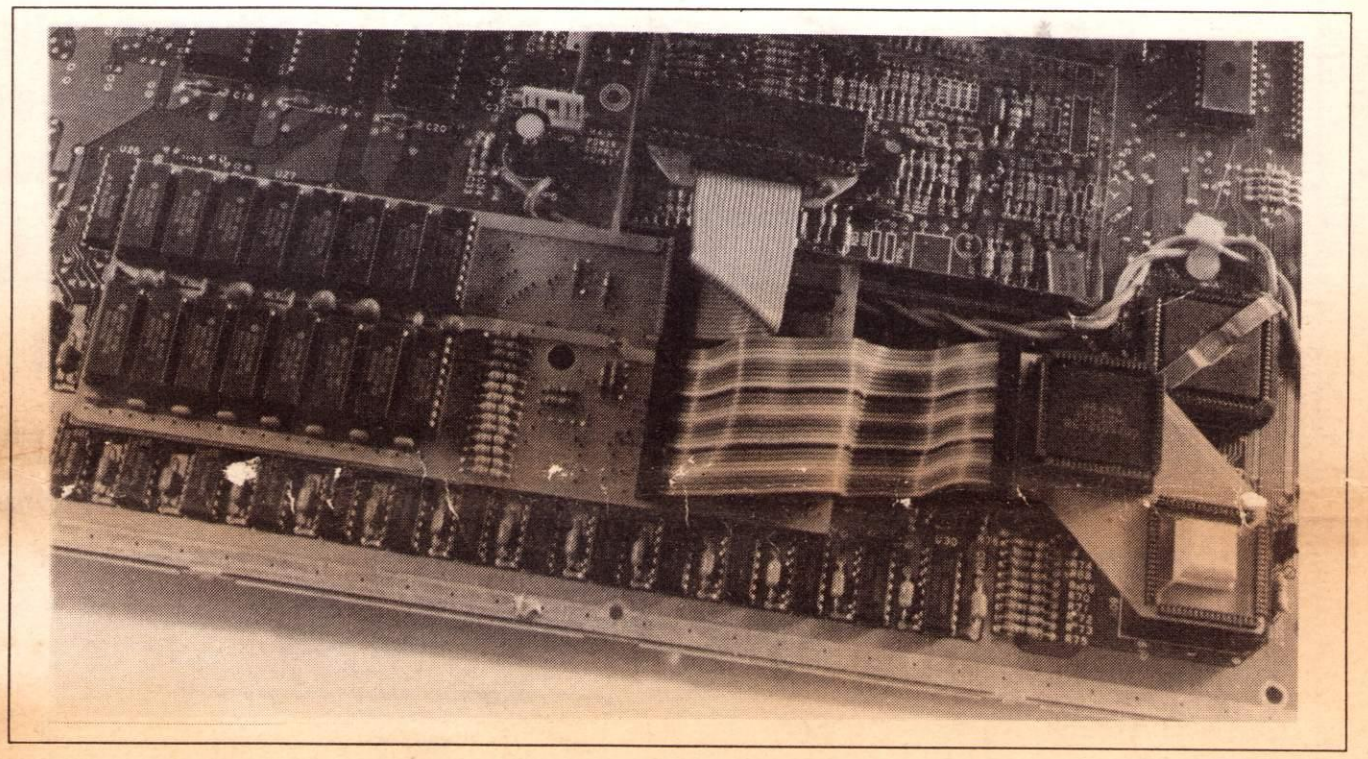
SEE PAGE 11

3 MEGABYTE 520ST

Since the introduction of the 1040ST last year 520ST users have been hungry for more memory. To satisfy that demand several companies have introduced different methods and upgrade boards to bring the 520ST up to 1 megabyte. The market and demand for 1 meg upboard grows and more 520ST users find the need for more memory. Especially with the growing number of memory hungry desktop accessories that are available. Software is starting to appear that requires a full megabyte of memory to run.

Now Atari has announced the Mega STseries with 4 megabytes and developers are scrambling to develop a upgrade for the 520ST and 1040ST. ThoughtSpace Development of Berkeley, California, one of the first developers to offer a 520ST board has announced a 3 megabyte upgrade board for 520ST and 1040ST users.



THOUGHTSPACE DEVELOPMENT "DOUBLETHINK PLUS" INSTALLED

DoubleThink Plus is a 2 megabyte upgrade board that will increase the memory of a 520ST to 2.5 megabytes and a upgraded 520ST and 1040ST to a full 3 megabytes. With the DoubleThink Plus installed, the system powers up automatically to 2.5 or 3 megabytes depending on which system you have installed the board in. The added memory is contigous with the original and acts in every way like the RAM already in your system. It is not limited to uses as a RAMdick; programs including the operating system can use this extra memory.

The board is a 7" X 3" circuit board with two cables with special connectors which are wafered in between the MMU and VDI chips. The only tools required to install the upgrade board is a pair of needle nose pliers and a medium size phillips screwdriver. These tools are necessary to open the ST and are not needed for the actual installation of the board itself. There is absolutely no soldering required, there are no electrical or physical modifications required, this is a easy user installed upgrade. If you can open up your ST, you can install this upgrade.

Once you have installed this upgrade, you can load and run the memory tests, demonstration programs, free ram checks and other goodies provided by ThoughtSpace on a disk that is enclosed with your board.

The 3 megabyte upgraded 520ST which we used for testing ran for over 72 hours without being turned off. The system nor the power supply heated up and all of the programs in monochrome and color ran with absolutely no problems. We loaded up the system with over 500K of desktop accessories, 100K for a disk cache, 32K for a print spooler and a 100K RAMdisk and ran 49 different programs with out a single problem. We performed all of the various disk functions such as transferring files, back-ups, file name changes, deleting files and loading programs from a combination of drives A, B, C, D, E, and RAMdisk with no problems. From the cartridge slot we exchanged various clock cards, such as QMI's DeskCart! and Digital Vision's ComuterEyes with out incurring any problems.

Besides the fact that you have more memory available and can run larger accessories with the DoubleThink Plus installed, you will notice that booting up your system and program loads will take longer. It takes approximately 10

CONTINUED ON PAGE 21

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M-CACHE

The Atari ST Hard Disk Enhancer

by MARK DEAL

M-CACHE by Michtron is a hard disk caching or accelerator program for ST users owning a hard disk. The concept of disk caching is not new; mainframes and minicomputers have been using the concept for many years.

Caching programs store frequently used sectors in RAM so that they can be accessed at RAM speed. RAM is accessed much faster than the hard disk and thereby increases the speed of the data transfer.

You must keep in mind that the use of a disk caching program will reduce the amount of memory in your computer and consideration must be given to the number of desktop accessories you are using and any RAM disks you may be using as well as any print spoolers. The optimum size recommended for a disk cache is 200 sectors or 100K. It may be necessary to remove some desktop accessories in order to fully benefit from the use of a disk caching program for 520ST users.

The disk cache works by accumulating copies of frequently used disk sectors and keeping them in RAM. The caching software uses an algorithm to determine which sectors will be retained in RAM and which ones will be discarded.

The use of a caching program is much preferable than using a RAM disk. The RAM disk creates a completely separate virtual disk and requires the user to copy programs or data into it before running a certain application. The disadvantages of a RAM disk is that if a file will not fit into the RAM disk, the RAM disk becomes useless and the performance benefit is lost. Additionally, any changes in the RAM disk require the user to copy the files from the RAM disk to a disk or hard disk at the end of a session. Also if there is a power failure all of the data is lost.

In contrast, a disk cache does not suffer from thoses disadvantages while still providing the performance of a RAM disk. If the data exceeds the allocated RAM, the most frequently used sectors will be kept in the cache and the least frequently are discarded. This method does not require that all the data be kept in the cache. All additions and changes made to the data files are automatically written to the disk and eliminates the inconvience and risk inherent in storing data in volatile memory.

The improvement is significant, by almost double the speed. Applications programs such as databases, accounting, speel checkers will be most dramatically noticed.

M-Cache is currently available from Michtron, for additional information contact your dealer or Michtron, 576 S. Telegraph, Pontiac, MI 48053 (3113) 334-5700

ATTENTION PUBLISHERS

Send your new product press releases to the attention of Richard Parker for listing in the Previews column.

To have your product reviewed in ST WORLD, contact Larry Payne to schedule reviewer.

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EDITOR

KURT MADDEN
ASSOCIATE EDITOR

JUDI LAMBERT
ASSOCIATE EDITOR

MARK DEAL
ASSOCIATE EDITOR

TOM PEARCE
ASSOCIATE EDITOR

STEVE FONG
ASSOCIATE EDITOR

LARRY PAYNE
GRAPHICS EDITOR

CONTRIBUTING WRITERS

RALPH C. TURNER
VICTOR T. ALBINO
TOM N. TJARNBERG
LAWRENCE RASMUSSEN

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ATARI'S EARNING SOAR....

$15.3 MILLION REPORTED FOR 1ST QUARTER

Atari Corp keeps on moving...Atari reports earnings of $15.3 million for its 1st quarter ended April 4, 1987. This represents more than 5 1/2 times the $2.7 million earned a year ago.

Atari's reported sales of $65.1 million, up 45.1% over the same period last year. Analysts attributed the increased revenues to the sales of the 1040ST. ATARI CORP is listed on the AMERICAN STOCK EXCHANGE and its symbol is ATC. Since it's public offering last November, Atari's stock has had a low of $11.25 and a high of $29.88, Atari closed 5/20/87 at $24 7/8.

The shipping of the MEGA series and the IBM clone later in this quarter is expected to increase Atari's sales substantiality. Analyst expect that the MEGA series will have more impact on revenue than the PC clone. Desktop publishing is anticipated as a major market for the 4 meg version of the MEGA ST.

A key element of the acceptance of the Atari in the desktop marketplace will be it's ability to provide "POSTSCRIPT" on the announced SLM 804 laser printer. Postscript is becoming the *defacto* standard for desktop publishing. Currently the QMS PS 800/SoftLogik Publishing Partner using PostScript/Atari ST configuration is the only acceptable alternative to the Mac laserwriter and PC desktop publishing systems.

Atari intends to concentrate heavily on improving its sales in the U.S. and has opened additional sales offices in Europe.

Atari recently completed a successful European bond issue of $75 million at 5 1/4%. It will use the proceeds to expand its business capital expenditures or acquisitions in the computer business and related areas.

ATTENTION

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the ATARI SHOW

NOVOTEL, HAMMERSMITH, LONDON - APRIL 24 - 26, 1987

Atari showcased the MEGA ST, Atari Laser Printer and the Atari PC line at the London Atari Show, this was reported as the largest Atari only show in the U.K. The show was hosted by more than 115 third party publishers and manufacturers as well as Atari retailers.

In addition to the main computer booth Atari set up a game arcade booth and a special MIDI booth.

There were many products shown that U.S. users will not see for some time and several hardware products that may never make it to U.S. shores.

Hardware products will be among the slowest to reach here

Hardware products will be among the slowest to reach here due to F.C.C. requirements which are more stringent than those required in the U.K. or Europe. A lot of interest was generated by the double-sided, double density disk drives that were available either as a single unit or double drive unit. One of the interesting 20 meg hard disks was being sold that looked as if it hasd been cloned from Atari's 20 meg MEGA drive system. A ST based weather station using a .9 meter diameter satellite dish, receiver set to receive and display signals from "METEOSAT", a meteorological satellite received high acclaim from attendees.

U.S. software companies have not utilized the cartridge slot on the ST, in the U.K. three companies demonstrated software on a cartridge for the ST. Two using the cartridge slot and one using the centronics port. A sound digitizer, which plugs into the centronics port, not the cartridge port of the ST. A ROM cartridge which provides a scientific calculator, clock and alarms, diary, note pad, typewriter, printer buffer and RAMdisk. The features are available when using most GEM based programs and does not eat up any RAM memory like desktop accessories as the programs are all in ROM. A cartridge based BASIC language program has received high marks from the British reviewers and is due in the U.S. in the next few weeks. The program has been selling well in Canada for several months.

The hottest new arcade game was a new release from Microdeal, "GOLDRUNNER", which sold out by noon the second day of the show. "GOLDRUNNER" should be available now in the U.S. Activision's "SHANGHAL" drew a lot of attention and was selling very well in several retailers booths. The game is based around a 3,000 year old Chinese game called MAH JONGG. The game consists of 144 tiles depicting flowers, seasons, dragons, the wind and other Chinese characters. This is a very challenging and addictive game. Retailers were having a field day, especially the ones selling blank disks and game software.

On the application side, there were several exceptional products selling and being previewed that have not yet reached the U.S. market. One wordprocessing program which many U.S. users have been waiting for, 1st WORD PLUS, is out and was selling exceptionally well. 1st WORD PLUS, is the enhancement to the 1st WORD program that was originally bundled with the Atari 520ST and has become a favorite of many users and developers. 1st Word Plus features footnotes, automatic numbering and same page formating, separate footnote ruler, mail merge (compatible with most datbase files), multiple rulers, flexible reformat controls, spell checker (checks spelling automatically as you type like Thunder or whole document), import graphics with special Snapshot feature, move images and overlay text and graphics, background printing, semi-automatic soft hyphenation and a host of additional wordprocessing features. No dates for its release in the U.S. was provided,

Eidersoft Software Ltd. featured it's Triangle brand of peripheral products for the ST. A single and dual double sided/double density disk drive, 20 meg hard disk drive (looks like a clone of the MEGA ST 20 meg hard disk), a 9"X6" high resolution graphics tablet which interfaces with Mirrorsoft's Art and Film Director.

Computer Concepts demonstrated "ST DOCTOR", a desktop accessory of general purpose utilities consisting of a memory editor, disk editor which featured edit file capabilities, load and save file, print file to disk in all available display formats, join and recover files, edit disks, print sectors by specified track or sectors, format disks in standard formats or customized formats, a macro key command function and a tool box of disk-related utilities. "FAST ASM", a 68000 assembler with built-in GEM based editor and "FAST ST BASIC", a BASIC interpreter in ROM cartridge.

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AEGIS ANIMATOR

Animation program for the Atari ST

by *Thomas N. Tjarnberg*

The other Saturday morning I was watching "The Pee-Wee Herman Show", one of the classic new T. V. series, and got inspired. You see (if you haven't yet watched the show thinking it is just for kids) Pee Wee has got a crack staff of writers, actors and animators (computer, cartoon and clay) working on his show and it is one of the most "hip" shows currently on T.V., as well as being one of the most expensive half-hour shows ever produced for "kids" television.

One of the first programs to address the animation capabilities of the ST is AEGIS ANIMATOR.

Anyway, they have a sequence every week where Pee Wee gets to jump into a "magic screen" and throw out a bunch of dots which bounce around the screen and make a connect-the-dots pattern that Pee Wee then connects into a car, plane or whatever and has an adventure against an animated backdrop. Well, all of us ST owners have our own "magic screen" and all we need is the proper software to allow us to connect our own dots and create imaginary worlds to enter into. One of the first programs to address the animation capabilities of the ST is **AEGIS ANIMATOR** from Aegis Development. This program, first developed for the Amiga computer, allows you exacting control over a number of artistic parameters to create your own animations to show off your ST or to share with your friends.

Before I discuss AEGIS ANIMATOR let me say a few words about the **AEGIS ART PAK I** program. This disk contains a number of screens full of art compatible with the NEO or DEGAS drawing programs. Drawings include buildings, trees, animals, a BIG motorcycle, vehicles and a few odds and ends. This package is intended to be used with Animator to provide objects for backgrounds and animations and all drawings have the unique feature of being done with the same palette. This allows you to use any combination of the drawings without having to worry about your tiger turning green or your capitol building suddenly becoming a bright orange. I think that this package is really great, especially if you have kids that can't draw (or if you can't draw either!).

You can use the cut and paste features of the graphics programs to create your own unique pictures from the many elements included here and should provide you with hours of creative fun even if you don't ever intend to purchase AEGIS ANIMATOR. The AEGIS ART PAK I sells as a separate package for $29.95 and the art was done by the person responsible for the DEFENDER OF THE CROWN art for that program. I have not seen any of the other clip-art packages for the ST but this one is quite good.

Now back to AEGIS ANIMATOR. If you are looking for a package that you can just load and go and create perfect results the first time out without reading the manual then this is not the package for you. You can do that with this package and get interesting results right out of the box, but to truly experience and fully understand the power that this program has you have to want to put in the time, to "pay your dues" so to speak.

The rewards are great but to get them requires to do your part.

Using this program is very much like playing the piano: you can sit down and get something that sounds good fairly quickly but to play well requires practice, patience and hard work. The rewards are great but to get them requires you to do your part. Now that I have that out of the way let us get down to business.

AEGIS ANIMATOR provides you with the tools to do 3 basic types of animations. Cyclic animation is very similar to that found in Degas or Neo in that you can pick a group of colors for the computer to rotate through to provide the sense of movement, as in a waterfall or sunrise. This option allows you to fade one color into another or display a group of colors during a particular portion of your animation. With careful planning this technique can be used to good effect.

The second type of animation, CEL animation, is very similar to the Saturday morning cartoon show type of animation. You have to have a picture for each part of the animation and display them one after another to create the desired effect. Cels are created by first drawing the pictures in NEO or DEGAS, loading them into Animator and then saving out the drawings you want with the CEL extender from the save menu. You can then load the Cels back into your animation at the desired locations and by careful movement and placement create elaborate cartoons. This method of animation is quite hard to use and requires careful planning but it can be done well, as the animation demo of a dinosaur and helicopter on the program disk shows. Possibly a future upgrade will allow you to load your pictures you have drawn that you wish to animate, show the program the positions you want them to be in and then have the program fill in all the movements in between the defined positions. As it exists now you have to specify exactly where each segment of your cel animation has to go and place them exactly on the screen. Once they are there you can use the Move command to move them from one place to another. However you can not, for example, get a creature to turn its head or wave its arms unless you place those pictures exactly where you want them and then erase in-between images that you don't want. It is quite a tedious process and I haven't mastered it yet but with practice I'm sure it can be done.

The third type of animation supported is called Metamorphic animation. With this feature you can take lines, polygons, circles, stars and blocks and manipulate them in any number of ways. You can move them, rotate them, enlarge or shrink them, make them go in and out of the screen and combine all of these options with several others to create complex movement patterns. Any object you can imagine drawn from these components can be made to do amazing things. This animation technique uses the concept of "tweening" to smooth transitions between one object position and another and therefore you don't have to define all positions of the object in order to get a lot of movement. You can, for example, draw a triangle and drag it across the screen, rotating in at several points along the path, and then play it back with the program smoothing all the movements making it look like the triangle is both moving and spinning all at once. Animations can be built up of many of these tweens and you can have a number of graphic elements in action at once to create a complex series of movements. Once you get your objects recorded you can go back and adjust parameters such as time or edit out parts of the animation you don't want to perfect your animation. Also, you can create a background using NEO or DEGAS and then have your metamorphic animations happening over that background. It is with the metamorphic animation that AEGIS ANIMATOR really shines and if you could use all of the metamorphic features with the cel animation portion then this program would be truly great.

CONTINUED ON PAGE 23

Window Shopping
for your Atari ST

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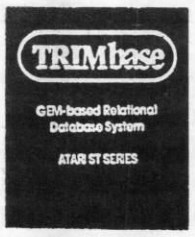

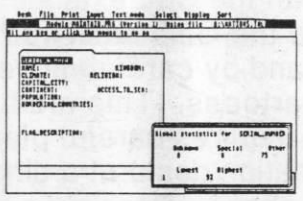

This Data Management system is simple to use; no programming knowledge is required, yet it has the power to handle large amounts of complex data. As your application grows, *TRIMbase* continues to supply efficient, quality support.

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Relational operations - Projection makes files smaller and easier to handle; Selection partitions large files; Merge forms one file from two with identical record cards; Subtraction removes a file from another; Join constructs a new file from the data of two or more files with different cards and layout.

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Which high level language for the Atari ST is as easy to program as BASIC yet has full access to system features and execution speed that rivals assembly language? The Answer? *GFA BASIC*.

GFA BASIC resembles Modula-2 or Pascal code with ability to accept parameters from the main program as well as using local variables. Also, the various MENU commands lets you handle GEM drop-down menus!

The most impressive functions of *GFA BASIC* are the EXEC and C: commands. EXEC lets you load and execute a non-BASIC ST application from within a BASIC program, while the C: command calls routines written and compiled in C.

GFA BASIC has an abundance of graphic commands, along with Unix-style DOS functions, and additions to the keywords offered by ST BASIC. Other dynamic features include Run-Time module, built-in editor, uses only 55K of memory, structured programming.

GFA BASIC stretches the definition of the BASIC computer language.

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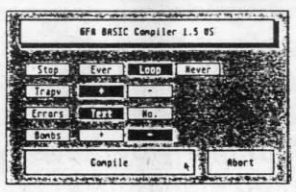

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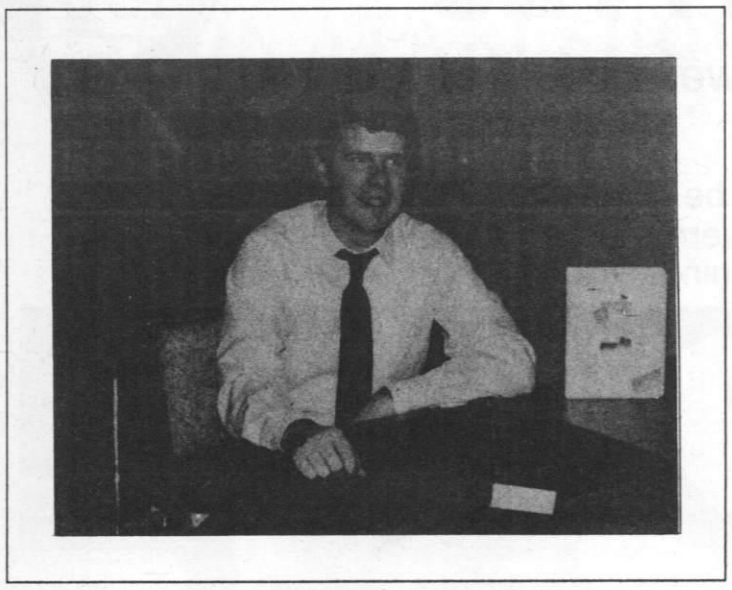

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BECKEMEYER DEVELOPMENT TOOLS

BECKEMEYER INTRODUCES ADVANCED BUSINESS SYSTEM SOFTWARE

MULTI-USER/MULTI-TASKING SOFTWARE FOR THE ATARI ST

by Judi Lambert

David Beckemeyer of Beckemeyer Development Tools (BDT) introduced the **"ADVANCED BUSINESS SYSTEM SOFTWARE"** (ABS), a powerful "Point of Sale Multi-user/Multi-tasking" software package for the Atari ST System, at the 1987 West Coast Computer Faire held in San Francisco, California. The introduction of the Advanced Business System software opens the door for the Atari ST to enter the highly competitive vertical professional and business markets with a powerful low priced alternative to higher priced systems. The Atari ST has not been able to successfully compete in these markets dominated by IBM's and clones with software previously available until now.

The Advanced Business System is extremely flexible and can be customized to fit a wide range of professional and business applications ranging from the small family business user to the multi-million dollar corporation in retail, wholesale, distribution, consulting, service, insurance, medical, dental, contracting, professional, engineering, food service and transportation industries.

The ABS Point-of-Sale Mutli-tasking software system includes: Electronic cash register software, inventory control, customer files maintenance, managerial reports with multi-user BDT Networking software. Optional software available: General Ledger accounting software to provide on demand current profit and loss statements, balance sheets, check writing, automatic double entry accounting. Transaction data is automatically posted to the general ledger; Color Touch Screen Workstation - all keyboard entries controlled from color touch screens with custom touch buttons and functions, completely eliminates the need for a keyboard.

Optional hardware available: Software controlled all steel Cash Drawer; A hand held Bar Code Reader to automatically enter bar code data on products for data input, eliminates mistakes and speeds check-out time.

ABS enables user to generate current sales charts and graphs instantly, accurate financial statements available on demand, cash flow management, inventory control, order entry and processing, and customer file maintenance.

Simple operation of cash register and point of sale system: User enters quanity and item number or description for each sale, system records sale, prints invoice or itemized sales receipt and adjusts the inventory. Inventory Control: User enters vendor number or name for report on all stock shortages. Graphs can be automatically generated to show product movement, determine re-order quanities automatically and generate a purchase order. ABS can be manually over-ridden to change values or adjust stocking levels instantly. ABS automatically matches purchase orders with receiving slips and records any discrepancy when merchandise is received, simultaneously updates vendor files.

The ABS can provide automated payroll processing, print inventory and or serial number tags, age lists and accounts receivables, computerize estimates and work order bids, schedule appointments, create customer mailing labels, and generate any user required reports.

File protection and sophiscated multi-user/multi-tasking software allows sales to be made from multiple locations at the same time. All inventory and sales records are adjusted instantly providing instant accurate information for each sale.

BDT provides dealers with a demonstration ABS including a quick-start disk to provide portable on-site presentations for potential users to evaluate the ABS system. David states, *"The customization and personalization of the software can be done by the end user or dealer."* On-line customer support is provided free of charge on the BDT Forum, a free bulletin board system for users of the ABS system. Additional information on the **ADVANCED BUSINESS SYSTEM** may be obtained directly from Beckemeyer Development Tools, or for the name of a Advanced Business System dealer near you, contact BDT, 478 Santa Clara Avenue, Oakland, CA 94610, (415) 452-1129.

ATARI $75 MILLION U.K. BOND OFFERING

Jack Tramiel, Chairman of the Board, Atari Corp. announced at the Atari Computer Show, Hammersmith, London, April 24th, 1987, that Atari will be offering a $75 million debt offering. Atari had previously announced they would be offering convertible subordinated debentures in the U.S. Atari's underwriters reportedly advised Atari that the demand in Europe was greater and that the offering could be made much sooner. Standard and Poor's had given Atari's $75 million in convertible subordinated debentures a single B-minus rating. The funds from the bond will reportedly be used to make acquisitions.

Nandu Marketkar, President, NSI, a chip and board maker headquartered in Marlborough, Mass. announced that Atari has purchased a equity position in the company. NSI will be supplying Atari with chips for the Atari PC's.

NSI sales in 1986 were $2.8 million and is estimated to grow to $8 million in 1987. NSI has also licensed to LSI Logic, Milpitas, CA., a Application Specific Intergrated Chip (ASIC's) which were developed by NSI. NSI also manufactures five add-in boards and produces 2 EGA chips.

NSI's goals are to provide IBM compatible makers upgrades to compete with the new IBM Personal System/2 line. No one knows or at least is willing to disclose at this time if Atari's soon to be released PC's will be compatible with IBM's newest Personal System/2 line...

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ATARI FEST 1987

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PREVIEWS

PREVIEWS is a caption of new products for the ST. Not a review or evaluation of the product or a recommendation of it's value or usefulness.

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24-PIN DRIVER V 1.0- for Easy Draw V2.0, will work with Star NB series, NEC P series and Epson LQ series 24-pin printers. Includes 180 Dpi Swiss fonts.
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QUANTUM MICROSYSTEMS INC. (QMI)
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DO-IT! ($24.95) - MS-DOS command line processor designed to make it easier to execute programs and manage files on the ST. Supports most MS-DOS V2 commands.
ST-TALK ($29.95) - Complete modem communications software. New GEM version with advanced features, uses full GEM control without changing screens. Fast 80X24 display with custom fonts within a GEM window, desktop icons for major functions using mouse or keyboard. Supports VT-100, VT-52, full ATASCII and VIDTEX graphics, file transfer using XMODEM, XMODEM CRC and batch YMODEM. Message and capture editor doubles as a min-word processor, Complete DOS functions and default path control, built-in help and RS-232 set-up, on screen status and clock. ($10.00 upgrade with original ST-TALK 1.0 or 1.1 disk.

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478 Santa Clara Avenue, Suite 300
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(415) 452-1129
HARD DISK INTERFACE & REAL TIME CLOCK CARD - With this interface you can connect economical industry standard hard disks to your ST. The interface also includes a built-in real-time clock which has its own battery so your ST automatically knows the time and day whenever you turn it on. Drivers are included which support hard disks of any size. You decide what size and brand hard disk you want - 5, 10, 20 even 100 megabytes! No soldering or electronic experience is needed; simply plug in the drive and go.
VSH Manager (34.95) - Visual shell interface to MT C-Shell. It manages a "virtual" terminal session with a GEM Desk accessory window, where you can type commands and run jobs - while using your favorite GEM application! Start a command running, and return to your GEM application.
HARD DISK ACCELERATOR ($39.95) less $5.95 to any registered owners of Beckemeyer products - Software program that accelerates hard disk access, disk caching.
HARD DISK TOOLKIT ($29.95) less $3.95 to any registered owners of any of Beckemeyers products - A stand alone hard disk utility package. It includes a fast, reliable back-up program that runs command level or in GEM desktop. This convenient toolkit will also maintain archives across machines and perform several other useful functions. May be purchased with source code for additional $50.00

BRODERBUND SOFTWARE, INC.
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San Rafael, CA 94903-2101
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ART DIRECTOR & FILM DIRECTOR ($79.95) - Full featured paint program that produces professional looking results. Symbolic icons, pull down menus and dialog windows make it exceptionally easy to use. 512 available colors, can be used 16 at a time, work on up to 16 canvases at a time (2 on screen at once). Special features include: rescale, stretch, distort, bend, bulge, spin, perspective, scroll, scrape to achieve highly creative and detailed effects. Film Director is a state of the art animation program. Pull down menus, symbolic icons and movable toolboxes, includes film library of previously created animation sequences, library of music and sound effects. Movies can be copied and sent to friends, designed to work with Art Director.
PRINT SHOP ($49.95) - Lets you design and print out personalized greeting cards, signs, banners and stationery. includes over 150 graphic design elements, including fonts and borders. graphic editor lets you create your own graphics. complete graphic layout flexibility without restrictive pre-defined templates. Includes preview and save features. Comes with reference card and starter kit of colored paper and envelopes.
KARATEKA ($34.95) - Suspenseful, movie-like story: You are a young karate master who must rescue your beloved princess from the evil warlord Akuma. Smooth animated characters and scrolling, realistic karate fighting-and you control all the moves.

COMPUTER TOOLS INTERNATION INC.
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IDRIS OS ($800.00) - port of Idris operating system to the Atari ST computers. Idris is a mature Unix-like operating system that is compatible 1984/usr/group Standard for UNIX-like systems. It has a rich set of utilities for file and text manipulation. Idris provides a large array of Inter Process Communication (IPC) facilities, such as shared memory, locks and messages, Idris is a powerful multi-user, multi-tasking operating system.

CONTINUED ON PAGE 23

ATARI TREK 87

ATARI TREK 87' held in Seattle, Washington was the first Atarifest sponsored by a consortitum of Atari groups in the Seattle area. The show drew approximately 3,000 Atari enthusiasts from as far as Alaska and Florida.

A few of the companies that participated in this years Atari Trek 87' were: MICHTRON, SUPRA CORP., DIVERSE DATA PRODUCTS, ASTRA SYSTEMS, QUANTUM MICROSYSTEMS INC., BRODERBUND, HYBRID ARTS, BECKEMEYER DEVELOPMENT TOOLS, COMPUTER TOOLS INTERNATIONAL, FUJI, ANALOG, ANTIC, BEST ELECTRONICS, MIGRAPH, SONY, WORD PERFECT, BUTLERS COMPUTER SERVICE, COMPUTER PALACE, CREATIVE COMPUTERS AND NYBBLES & BYTES.

If you haven't been to an Atarifest you are missing a great opportunity to meet fellow Atari enthusiasts as well as having the opportunity to meet representatives of 3rd party software publishers and manufacturers. In addition to seeing demonstartions of some great new products. At all of the shows to date, there have been great buys on all Atari products. If your group is interested in having an Atarifest in your area, contact Sandi Austin at Atari Corp. for assistance.

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EXODUS: *ULTIMA III*

THE ULTIMATE CHALLENGE

BY THOMAS N. TJARNBERG

When the definitive history of computer games is written there is one series of programs that will deserve a special place in that account. Over the years a gentleman know as Lord British has created and released a series of games that transport the player into another world, one that is rich, detailed and full of excitement and adventure. That series is the ULTIMA series of games and so far there have been four entries in the line, with ULTIMA V to be released for some systems this fall, and the ST series next spring. Ultima I saw you in fierce battle with the evil Mondain who was causing any number of troubles for your land. Ultima II brought the arrival of Mondain's apprentice, Minax, who you defeated after much time and effort. Now, as it turns out, Minax and Mondain got together and a new menace, Exodus, was born to destroy the peace you had brought to your land of Sosaria. Now you are faced with the greatest challenge yet to the peace of Sosaria and must defeat Exodus in ULTIMA III.

These games fall into what I call the "action-adventure" genre of computer gaming. The player controls a computer alter-ego through a series of trials and tribulations in the pursuit of some goal or quest and must do a lot of exploring and battling along the way. Some arcade elements are usually involved as well as problem solving and treasure collecting. Once the game has been "finished" you can always replay the contest looking for better ways to do things or to explore areas you skimmed over the first time through. These games are usually very similar to the "dungeon and dragon" school of role playing adventure games with the computer being the dungeon master doing all the calculations and controlling the scenario.

OK, I'll admit it right off: I find the Ultima series to be one of the finest series of games I've ever had the pleasure of loading into my computer. They create a totally involving universe with an incredible amount of territory to explore and map, many characters to interact with, serviceable graphics and more value for my software dollar than many other programs. There are several companies, such as S.S.I. that make similar programs for the ST but I have not tried any of them as of yet, although I understand that their play and actions are quite similar to the Ultima series. In fact, S.S.I. licensed the Ultima concept from Lord British to be used in their game Questron for the 8-bit ATARI line.

In ULTIMA III you create and control 4 characters that together explore the realm of Sosaria. These characters can be human, elf, dwarf, bobbit (not hobbit!), or fuzzy and can be of a number of classes, such as fighter, cleric, wizard, lark, etc. You assign them attributes for strength, intelligence, wisdom and dexterity. Once your party of 4 characters is formed you enter into the world of Sosaria. The game is played on a map of Sosaria with your screen divided into your view of the world on the left, 4 boxes with the stats of your players on the right and a dialog box in the lower right hand corner. The graphics are quite nice and the characters are small yet detailed, but they are not that far advanced over the 8-bit version of the game. The main improvement is in the use of the 16 available colors in the low resolution mode. Graphics are not the main point of a game like this any way, and the appearance of the game is quite nice.

CONTINUED ON PAGE 22

LONDON ATARI SHOW

CONTINUED FROM PAGE 5

MicroAPL Limited of London demonstrated "APL", a very high level, general purpose, fourth generation language which has been around for some time, mainly on IBM mainframes. Some of the enhancements featured on the ST version include built-in screen editor function, fully integrated with GEM, standard Atari interface, access to TOS native files, mouse editing, pull down menus, dialog and alert boxes, and machine code interface.

HB Marketing Ltd. previewed "SIGNUM", described as a document processor. The most impressive feature of this WYSIWYG program is the outstanding quality of the dot matrix printer font print out capabilities. Signum allows up to 7 fonts, including fancy fonts and the capability to print and display equations in scientific format to be active in a document, including user created fonts. Mixing of text and diagrams, which can be "grabbed" and moved around the page in 1/90th" increments horizontally and 1/54th" vertically. Other features include automatic page numbering, headers, footers, search and replace, micro-justification, micro-inter character and line space control and on screen help menus.

System Exclusive Ltd. of London introduced "ICONIX", a MIDI software sequencer providing real-time recording, song chaining, step editing, data manipulation in groups or segments, assignable controllers, multiple level chaining and a host of other features providing a comprehensive integrated MIDI package.

Microdeal introduced "ST-REPLAY", a sound digitizer. ST-Replay is a cartridge that plugs into the cartridge port of so those of you 1st WORD users will have to be patient or try buying a copy from a U.K. or Canadian dealer.

Software Punch of Liverpool released "PUNCHNET PLUS", a high speed network system for the ST. The system uses GEM based software and consists of a second processor, and extra cards. The extra cards are capable of controlling their hard disks, tape streamers, an EtherNet interface and even an 800 Megabyte optical hard disk. PunchNet Plus allows 32,000 users in each network and an equal number of printers and hard disks can be attached. In addition, the net work is designed to alow the connection of any computer with a floppy disk interface in the network. On the Atari ST the network connects through the DMA port. Software Punch plans on writing drivers for PC's and other clones, which can be connected through their floppy disk port. 3rd quarter plans are to introduce a 5.25" floppy disk drive in IBM and BBC format, a 16 serial port card to connect to mainframe IEEE controllers, A-D and D-A boards. All of the additional peripherals added to the network can be accesssed by any of the network users as if they were attached to their own computer.

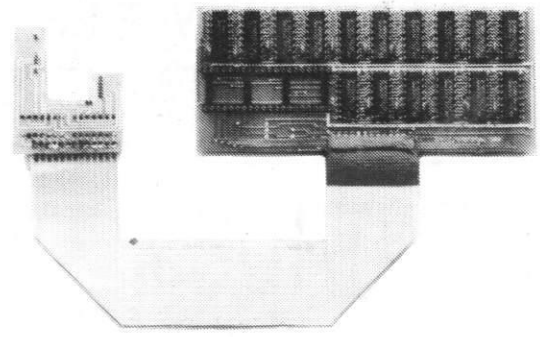
Mirrorsoft of London demonstrated Andromeda Software's Art Director, a outstanding paint program to design simple designs or complex professional presentations with animation capabilities and Film Director, a program which allows you to create and assemble on screen every element of an animated sequence - characters, background scenery and soundtrack. Mirrorsoft also presented Fleet Street Publisher, a desktop publishing program for the professional, including 24 pin and postscript drivers.

Computer Concepts Ltd. of Hempstead featured FAST BASIC and previewed CALLIGRAPHER. Calligrapher is featured as a word processor, but contains many features found in desktop publishing programs such as mixing text and resizable graphics, and could easily be advertised as such. The program is completely GEM based, runs with GDOS. It can use any GEM fonts and will drive any GEM output device. This includes high-res dot matrix printers and will include the Atari Laser printer. Calligrapher can also import either GEM pixel graphics files (produced by GEM paint, etc.) or GEM object based graphics from packages such as GEM-Draw and Easy-Draw. The program runs on either 520ST or 1040ST in mono or medium res., Calligrapher is scheduled for delivery in the U.K. this August.

the ST and is capable of sampling sound from any source similar to a cassette player, stereo or compact disk player, TV, musicial instruments and even human voices. Samples can be saved to disk, loaded from disk, view the waveforms, magnify waveforms, select and save portions, remove areas, change the speed, cut and paste, play forwards or backwards, append and overlay them. The samples can be used in programs written in machine language, C, Atari BASIC, and of course GFA BASIC. Included with the cartridge is "ST-ECHO", a program which will allow you to edit samples with special sound effects, including sound delay and various degrees of echo. The digitized samples can be played back through your monitor speaker, TV or through your stereo system. The sampled sounds do not require the ST-Replay cartridge to replay the digitized sounds through the monitor speaker. ST-Replay will be available in the U.S. from Michtron.

Precision Software of Surrey introduced their first product for the Atari ST, "Superbase Personal". Superbase Personal is a powerful GEM based database management system that does not limit you to the number of fields or the sizes of your records. You can open as many files as needed to build a relational report. Unique to Superbase Personal is the capability that allows graphic pictures to be displayed next to their database record. Superbase Personal will be available in the U.S. from Progressive Peripherals and Software.

EZRAM™ 520



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PCs INTRODUCED IN U.K.

ATARI UNVIELS PC'S TO UNITED KINGDOM MARKET

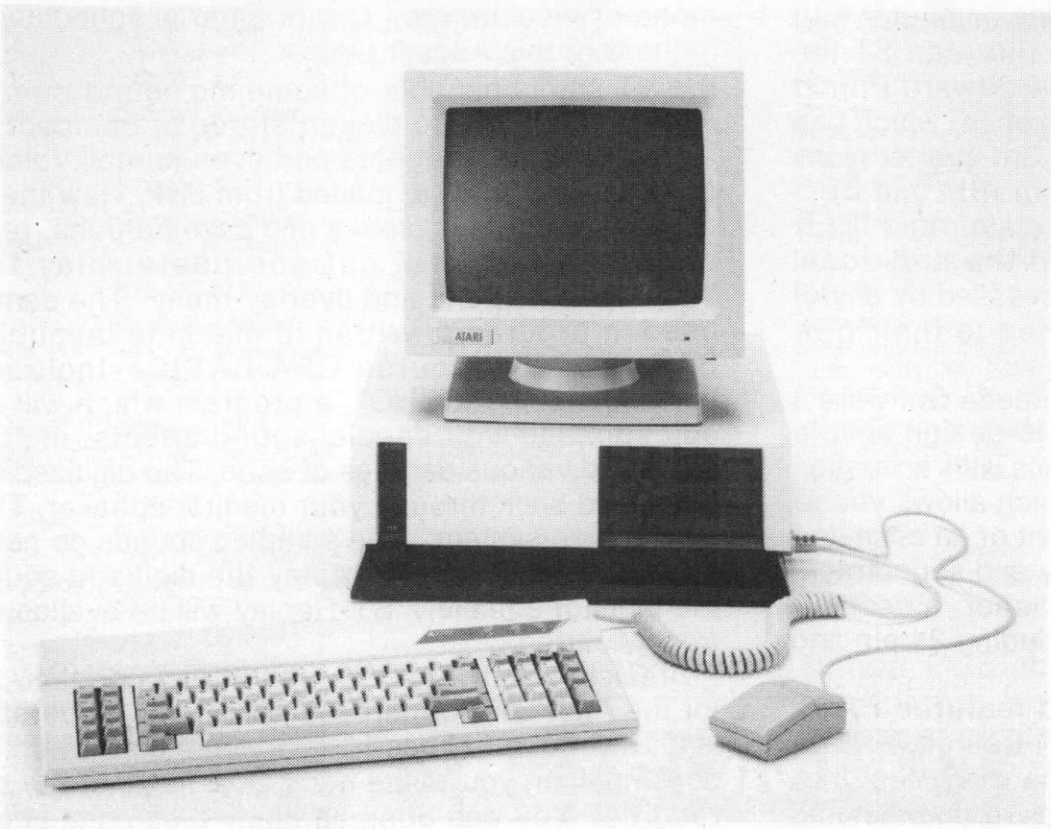
ATARI PC - ENTRY LEVEL SYSTEM CONFIGURED WITH SINGLE 5 1/4" DISK DRIVE

Atari U.K. introduced the Atari PC - Entry level system at the London Atari Show. The new PC to ship third quarter to the U.K. distributors features an 8088 microprocessor with a switchable clock speed of 4.77 Mhz or 8 Mhz.

The PC has 512K RAM as standard expandable to 640K, plus 640K of screen RAM. Sockets are also provided for 8087 math co-processor. A major feautre is the standard built-in graphic modes: IBM monochrome, CGA and EGA graphics without the need for additional cards.

The standard PC will include a 360K 5 1/4" floppy disk drive, with the option of fitting a second 5 1/4" floppy disk drive.

A standard centronics parallel printer port and an RS232 serial port will also be standard.



ATARI PC - EXPANDABLE SYSTEM CONFIGURED WITH TWO 5 1/4" DISK DRIVES

The new Atari PC - Expandable system has a larger system unit than the above entry level system. This allows the system to be configured as a single or dual drive system using 5 1/4" inch half height floppy disk drive or as a single floppy disk drive with an internal 20 megabyte hard disk drive.

A major feature is the provision of 5 expansion slots to house industry standard PCB expansion units. This allows for future enhancements of the Atari PC.

All other features of the expandable Atari PC system are the same as the entry level system.

PHASAR

PROFESSIONAL HOME ACCOUNTING SYSTEM AND REGISTER

BY *MARK DEAL*

Antic introduces PHASER, (Professional Home Accounting System and Register), a GEM-based single entry accounting system for the Atari ST. The PHASER package consists of two separate programs, one is the actual single entry accounting program and the other is a tax program consisting of modules to prepare your income taxes.

PHASER is a personal accounting package but can be used by many small businesses. PHASER can track 130 separate expense and income catagories and handle up 40 accounts. Small business that have less than 500 transactions per month may find that this program may be suitable for their accounting needs.

Unique to home accounting programs is the capability to graph the data and output the data files to A-Chart by KUMA marketed by Antic. A Date/Address organizer is included which will store up to 250 names, addresses and phone numbers. A scheduler stores special occassions and displays preset occassions or appointments on boot.

The separate tax program allows you to design your own tax forms and provides the capability to determine you tax liability at any time. A handy feature for those that must make quarterly estimates and deposits. The tax tables may be edited by the user so that the tax program will never be out of date.

PHASER is a very easy program to use, in order for it or any accounting program to be accurate you must first take the time to determine your expense and income catagories as well as current balances on open accounts. Great care should be taken in setting up your program, PHASER is very forgiving and will let you add new accounts and expense catagories at any time.

Setting up a computerized accounting program in the middle of the year can be a very difficult task, many users wait until the first of the year to start their computerized accounting just because of the problems incurred in middle year set-up. PHASER is designed in a fashion that setting up the program and bringing it current is a very easy job. Once you have set up your accounts and expense catorgories, bringing your accounting system up to date is a matter of entering all of your checks and account balances. Normally this is a very difficult task, but with PHASER it is only time consuming to enter the data.

I received PHASER last month and had five months of data to enter to bring PHASER up to date. I first gathered all my bank statements and charge statements for the year. This took several days alone...I then made up a list of the expenses that I wanted to keep track of and a list of all of my charge accounts (credit cards).

Loading up PHASER, the familiar drop down menus catagories for PHASER appear at the top of the screen. Select the set-up accounts menu and then select the set-up accounts. A new screen will appear for you to enter the names of the accounts you will be using and the balances. You should start with the balances as of the begining of the year for each account. I started with my checking account and entered the beginning balance from my January checking account statement. Remember, the beginning balance from your checking account statement will reflect a begining balance for some period in Deember as most checking accounts are not from the first of the month to the end of the month. Enter the beginning balance and after entering the transactions it will work out. Enter your savings, checking, charge accounts, any other accounts payables and all of your income sources for which you want to keep track of. Next select the set-up expense heading and enter all of the expenses that you want to keep track of.

Now to begin entering your prior transactions to bering you up to date. Select the enter transactions menu and then answer the prompt for the account you want to update. You probably will want to start with your checking account so select that account. Enter all of the checks from your January statement, even if they are checks that you wrote in January or elese you will have to manually figure out your beginning balance and separate your checks accordingly. If you do it my way, your account will balance each and every month. Do not reconcile your bank account until your have entered all checks and deposits. It is best to enter all of your checks and deposits from your statements. PHASER can sort them into proper order by check number or by date as you desire. Do this for each of your credit card accounts from the statements.

When you make your entries, PHASER will prompt you for each check, or charge and payee, expense catagory, description, etc. In case of deposits it waill ask you for the source as well. If the payee is to an account that you have set up in your account PHASER will credit or debit that account accordingly. Remeber that PHASER is a single entry accounting program and you never have to enter a transaction more than once to get all of your accounts up to date, just enter all checks and charges as they are made and you will always have your system up to date and be able to view your account balances at any time.

PHASAR does not require you to remember the names of all your expense account catagories or account names. You can enter a part of the account name and PHASER will enter the rest of the name for you, if you enter V for Visa and have another account named Victory, PHASER will display all of the names which begin with V for you to select from.

PHASER allows you to make a split transaction, such as writing a check to the local grocery store for a little more for mad money. When you record the check you can split the entry so that the actual amount of the grocery purchases can be entered into your food expense accont and the rest into a cash account. If you desire you can also enter the cash account portion and list what you used the cash for if you want to keep track of all of your expenditures. There is also a handy calculator you can call up if you need some help to figue out the spitting of the transaction. PHASER will not let you split the transaction and not account for the money incorrectly. Once you have completed the split transaction PHASAR will inform you that the sum of the parts equal the whole amount of the check and then let you continue.

The reports section of PHASAR provides you with account status, month by month summaries, cash flow, and net wort (assets and liabilities). PHASAR will plot trend vs budget and perform loan and savings analysis. PHASAR can also print your checks if you so desire.

PHASAR is a dynamic home accounting program, powerful, versatile, fast and easy to use. Of all of the home accounting programs that I have used on the ST, PHASAR is the only one I have found that you can actually use.

For additional information, contact Antic, 544 Second Street, San Francisco, CA 94107 (415) 957-0886

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DeskCart!

The Atari Desk Accessory Carteridge

by Lawrence Rasmussen

I just received a QMI **"DeskCart!"**, I was beginning to wonder if this was another product for the Vaporware Hall of Fame. DeskCart! is desktop accessory CARTRIDGE! for the 520ST or 1040ST. The little cartridge measures 2" X 3 1/4" X 3/4" and contains a battery operated clock and 14 desktop accessories and occupies only about 75K of your system'sprecious memory.

By using the DeskCart!, you will have 14 desktop accessories available and use only one of the six allowable on your desktop. DeskCart! contains a Calendar, Note Book, Card File, Calculator, Typewriter, Address Book, V-52 Terminal, Keyboard Macros, Ramdisk Control, Disk Utilities, Print Spooler, Control Panel, Screen Dump and Memory Test.

Calendar - Displays the month, day, year from January 1940 to December 2040. Utilizes scroll buttons to scroll the years and months forwards or backwards. The scroll bars jump the years by 10 and the month bar moves you rapidily through the months. The current day is displayed on the calendar by outlining the date.

Appointment Book - is a little database allowing you to schedule appointments or dates to remember. Alarms will ring through your monitor at the time set. One feature I really like about the appointment book that is different then most alarm or appointment schedulers is that your can scroll appointments for the day and if a alarm or appointment was scheduled and gone between the last time you had the computer on DeskCart will let you know what you've missed.

Note Book - has 12 pages available and allows as many notebooks as you want or have room for on your disk. On the bottom of the notebook page there are 5 icons depicting a load disk, save disk and printer, find command and erase command. A mini-word processor, as you can print the pages directly or go through the Print Spooler accessory and set margins.

Card File - is a mini-database manager for storing up to nine lines of data and with print and search commands.

Calculator - is a high powered multi-function scientific and a programmer's calculator.

Typewriter - This function is really slick and handy. It work s like one of the memory electric typewriters. What you type is displayed on the screen as entered, you may back space to correect any errors, hitting the return key sends line to the printer. This function is great for addressing envelopes of writing letters and memos.

Address Book - A mini-database to help in keeping track of addresses and phone numbers and allows you to dial directly from the book. Obviously you must have a modem hooked up correctly to use this function to dial your phone numbers.

VT-52 - Terminal emulator allows you to communicate through a modem to other computers. No fancy uploads/downloads, just straight text transmission and receiving.

Keyboard Macros - Set macro command keys for use in most ST software programs, super powerful accessory. Take some time to play with this option and fully understand it, you will save a great deal of time and find it to be one of the most used accessories. This function is worth the price of the card alone.

Ramdisk - sets up a RAMdisk sized to your requirements to install on any drive you designate up through the letter P.

Disk Utilities - Provides disk operating functions: Copy, Delete, Format (normal or enhanced 10 sector), rename and disk status.

Print Spooler - Default set to 24K but can be adjusted to any amount you have available memory for. Allows for setting lines per page, line spacing, fix tab spaces and margins. The most powerful feature is the capability to select serial or parallel output and direct the output to either device regardless of what your software is configured for. You can have a serial Okimate 20 color printer on the serial port and a parallel printer hooked to the parallel port and send output to either one by selecting through this accessory.

Control Panel - Similar to control panel accessory you receive with your ST, this one is easier to work with.

Screen Dump - Uses the familiar Alt/Help keys to perform screen dumps, the difference is that you can print screen dumps vertical or horizontal and load print drivers.

Memory Test - Test memory of your system letting you know how much memory you have available. Will display any errors found during memory test. Will also tell you which version of TOS and DeskCart! you are using.

This brief run down of the desktop accessories will help you decide if DeskCart! is for you, I as with most have many of the desktop accessories contained in DeskCart! now and they were FREE! However, *I would not hesitate to purchase DeskCart! again just for the couple of accessories I really enjoy using in DeskCart!* and the bonus is that I now have more memory on my 520 since dumping the duplicate accessories I did have eating up memory. Highly recommend...Quantum Microsystems Inc. (QMI), P.O. Box 179, Liverpool, NY 13088 (315) 451-7747.

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TWO BOOKS

REVIEWED BY *RALPH C. TURNER*

Let me tell you about two books, one of them naughty, the other simple. *The Hacker's Handbook* is the naughty one, and luckily it deals with more than just hacking. *Atari ST User's Handbook* is the simple one, and it covers some of the fundamentals of using the ST.

* * *

If *The Hacker's Handbook*, by Hugo Cornwall, were merely a manual for illegally entering into computers, it might be dismissed as irresponsible.

Fortunately, it is much more than its name suggests. In fact, so much of the book contains general discussions of electronic and computer history, principals, and systems, that even the reader who has no intention of ever hacking is likely to find it informative and worthwhile.

WHAT IS A HACKER?

This 169 page paperback starts out with a definition. A hacker, as the term is used by the author, is a person who attempts to make unauthorized entry into computers, and to explore what is there. The reader is then treated to a brief history of hacking, before the book proceeds to the actual ins-and-outs of computer entry. In the process of revealing some of the secrets of hacking, however, Cornwall also gives us fairly detailed introductions to telecomputing, networking, computer operating systems, and communication protocols.

For instance, while laying the groundwork for discussions of computer-to-computer communication networks, Cornwall gives us a good overview of the technology of using cables to transmit information. We're led through the basics of telegraphy, synchronization between sending and receiving stations, analog and digital networks, and packet switching.

A COMPUTER AND A RADIO

The chapter entitled "Radio Computer Data" is another example of the unexpectedly broad scope of this book's coverage. Cornwall explains how to couple a radio receiver with a computer in order to access the data transmitted by news services, commercial and maritime messages, meteorological data, and heavily encrypted diplomatic and military traffic. The section ends with a discussion of ways to eavesdrop on data traffic from educational and weather satellites.

By now, however, some of you may be chafing at the bit with the $64,000 question: just how far does the book go in describing the specifics of how to hack?

Pretty far, actually. Oh, Cornwall doesn't give out any presently usable telephone numbers, but he does discuss how they're acquired. And although the book doesn't present us with passwords to any specific computer systems, it does give hints of how to guess passwords.

My main objection to the book concerns the author's repeated attempts to justify what he calls the "sport" of hacking.

A POOR JUSTIFICATION

Early on, he deals with the inevitable criticism that such a book will provide guidance to potential criminals. Here's what he has to say in defense of hacking:

"Few people object to the sports of clay-pigeon shooting, or archery, although rifles, pistols and crossbows have no 'real' purpose other than to kill things; just as such sports are valid and satisfying in themselves, so hacking is quite sufficiently fulfilling without wreaking damage or violating people's privacy. Second, real hacking is rather more difficult than is often shown in the movies and on TV."

Even if hacking doesn't do damage or invade privacy (and that's debatable), his argument is weak. It's like a trespasser saying that his breaking into a house is ok because he doesn't destroy anything or look into any private things.

And although what he says about the treatment of hacking by the entertainment media is true, this fact doesn't justify the encouragement of hacking. If it did, anyone could write a book, for instance, on how to become a drug dealer, then claim (as justification for releasing the book) that actually being a drug dealer is a lot harder than the TV shows would have us believe.

No, let's face it. If you hack, you're probably breaking the law. But there's nothing wrong with reading about hacking, especially if you learn a lot of useful information in the process.

The Hacker's Handbook, published by E. Arthur Brown Company, is a book that goes a long way in satisfying the armchair hacker in many of us.

ATARI ST USER'S HANDBOOK

When I first picked up the *Atari ST User's Handbook*, by Gilbert Held, I hoped that I had finally found something which would answer the questions faced by new ST owners who've never had a computer before.

If you are, or were, one of these novices, you'll know the kind of questions I'm talking about. "How do I change from the A drive to the B drive" is probably the most common one, but there are others: "Why does my monitor's image shake?....it didn't used to," and "Sometimes a Control Panel or a VT-52 Emulator is in my Desk menu, other times they aren't. What's going on?"

Unfortunately, the *Atari ST User's Handbook* doesn't answer these questions. In fact, those portions of the book which deal with using the ST only cover, for the most part, subjects which are found in the Owner's Manual, which you receive when you buy the ST.

In spite of this, some ST users will find Held's book useful. If, for instance, you're having difficulty with things which are covered in the Owner's Manual, then the *Handbook* may help. (Years ago, when I was trying to figure out the mysterious working of automobile engines, I learned the value of reading more than one author's description of how to do something.) But if your problem's not covered in the Manual, you probably won't find a solution for it in *Handbook*.

Nevertheless, what Held does cover, he covers well. The book is well written, and, for the most part, each procedure is described in simple, meticulous, thorough detail. (This is something that can't be said for the Manual.) And in addition to the main part of the book, which covers using the ST, there is a 34 page introduction to Logo.

Finally, although the book doesn't include some of the things I'd like to see in a beginner's handbook, it has proved useful to friends of mine who purchased STs. I lent the 159 page paperback to them the day their new machines arrived, and although it didn't eliminate the inevitable confusion caused by an incomplete owner's manual, it did seem to make the initial learning process go more quickly.

So maybe it's a good book, after all. Certainly, it's not a naughty book.

The Hacker's Handbook
by Hugo Cornwall
E. Arthur Brown Company
3430 Pawnee Drive
Alexandria, MN 56308
(612) 762-8847
169 ppg. $12.95

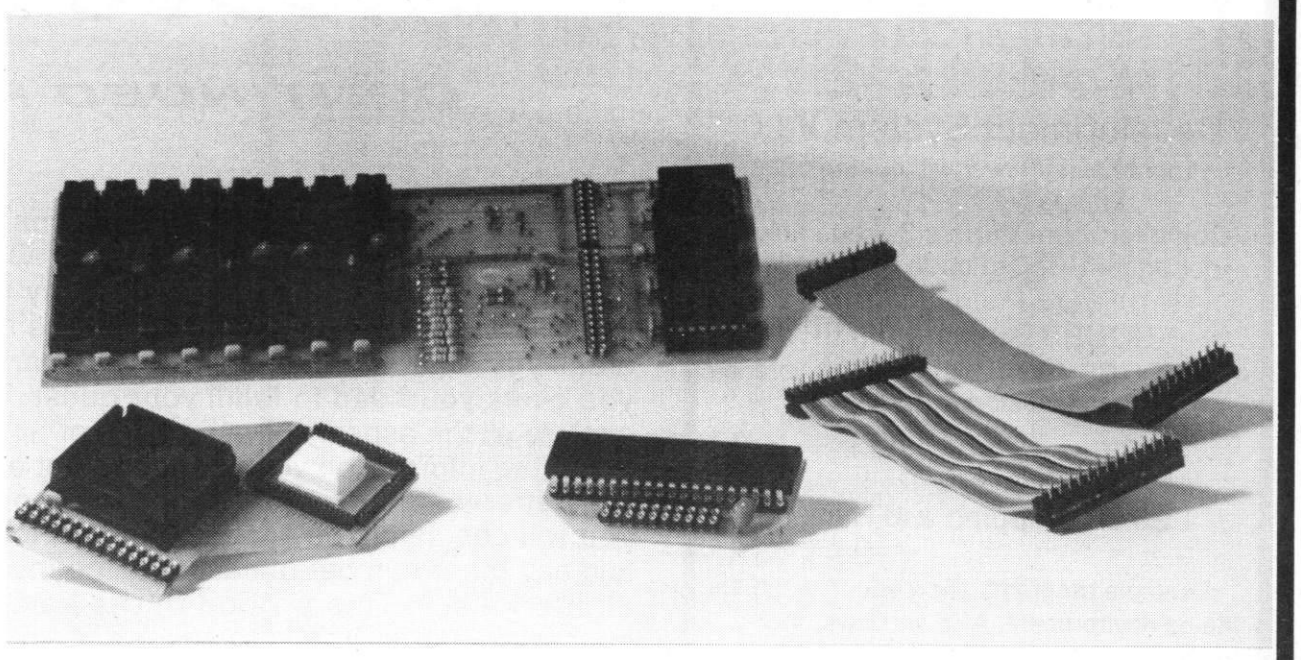
Atari ST User's Handbook
by Gilbert Held
Weber Systems Inc.
8437 Mayfield Rd.
Chesterland, OH 44026
159 ppg. $9.95

UPGRADE BOARD

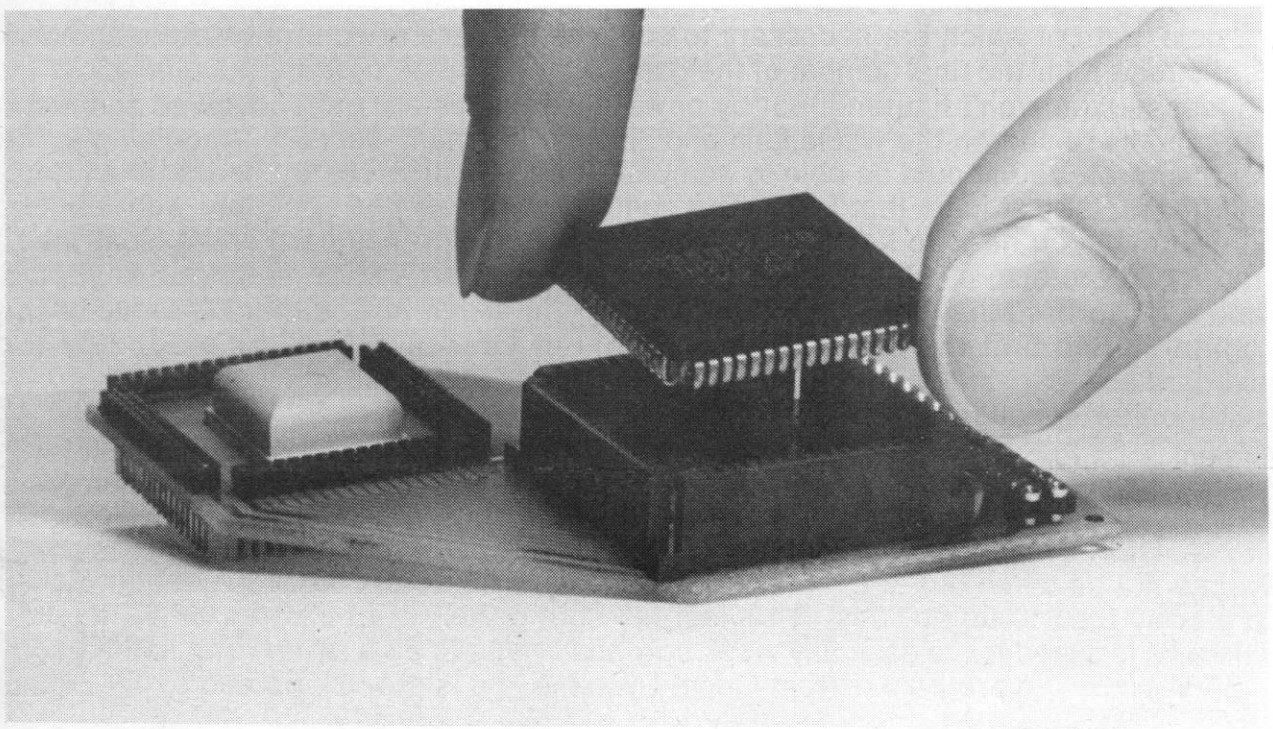
CONTINUED FROM PAGE 1

seconds for each accessory to load, if you have six accessories (maximum) to load on boot there is a full additional minute added to your normal load time. When loading programs you will notice that it takes another 15 to 30 seconds after the program is loaded before your cursor appears. On Publishing Partner, 27 seconds and 36 seconds with TextPro.

The unit was flown to Seattle, Washington for Atari Trek 87' and via Alaska Airlines in the bagage compartment and ran absolutely fine for the two days of the show. Beckemeyer Development Tools ran demonstrations of their multi-user/multi-tasking system networked with 2 other 1040's and had the benefit of an extra 2+ megs of memory available



COMPLETE 2 MEGABYTE UPGRADE BOARD COMPONENTS



INSERTING MMU CHIP INTO DOUBLETHINK PLUS

DoubleThink Plus is available now at a suggested retail of $699.00, for a limited time ThoughtSpace Development is offering a limited introductory price reduction of $100.00 bringing the board down to $599.00, that works out to about .2995 or under 30 cents per 1000K of additional memory. For additional information contact ThoughtSpace Development, 2450 Warring Street, No. 21, Berkeley, CA 94704 (415) 845-1415.

2 MEGABYTE UPGRADE BOARD INCREASES:

520ST TO 2.5 MEGS
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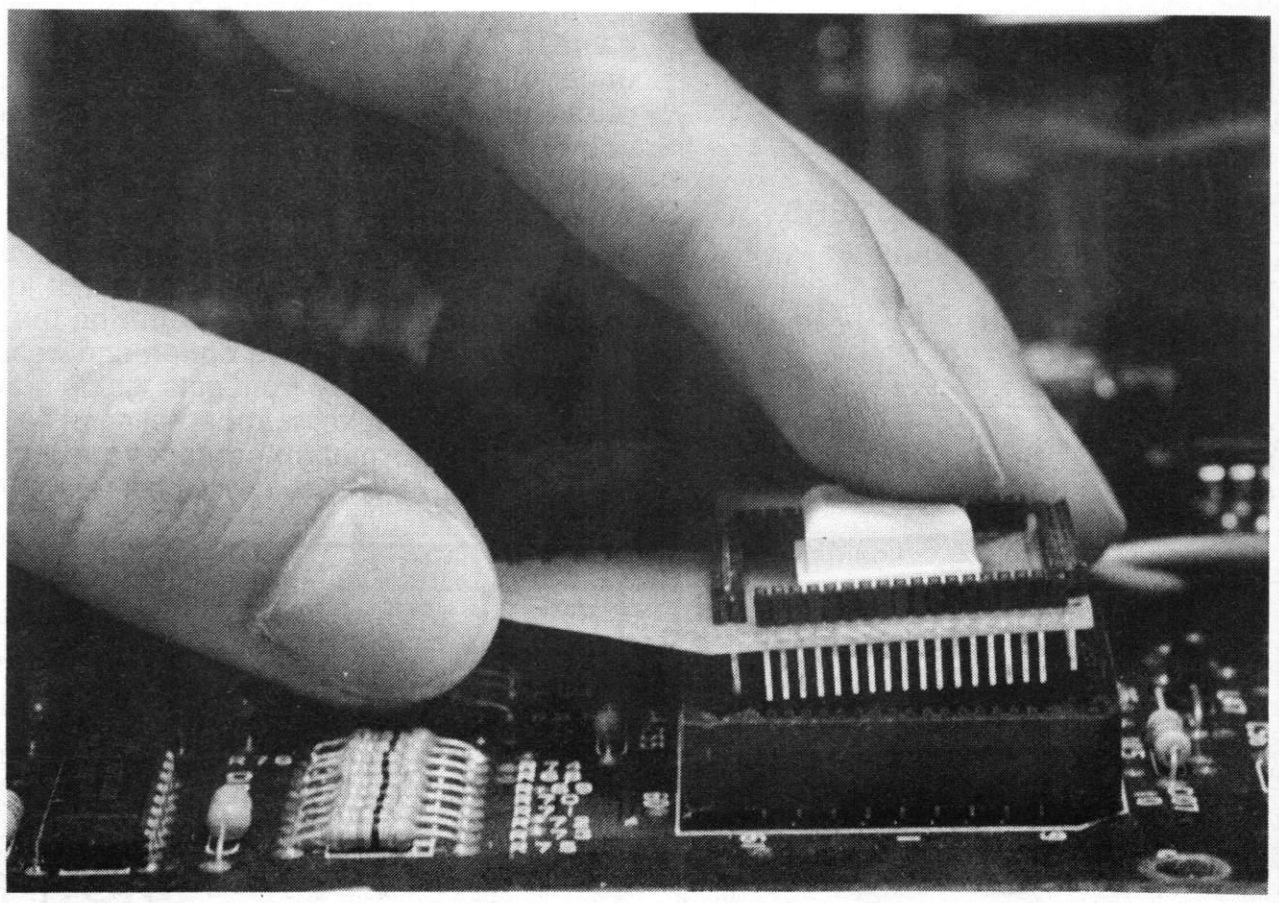
1040ST TO 3 MEGS

Installing special ThoughtSpace Development MMU connector into Atari 1040ST system MMU socket.



INSTALLING DOUBLETHINK PLUS MMU BOARD INTO ST

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Example programs show you how to use the os environment, AES windows, the traps and 'bomb' vectors, floating point co-processors and more.

The examples will show you how easy it is to translate many existing C programs into Modula 2.

Our programs are fast. Benchmarks show speed as fast 'or faster' than other languages and you can tune your program to make it even faster and a lot smaller.

*We are still adding features to V1.0. You get the best compiler around, with updates available by sending a SASE and disk, or you can send $10.00 for an update.

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EXODUS ULTIMA III

CONTINUED FROM PAGE 14

As you explore this world you come upon cities, towns, villages, castles and dungeons you can enter and explore. Once you enter one of these(which requires some disk access;sure sign of an easy port over from the 8-bit world) you see an enlarged layout of the city and all of the shops, pubs and rooms within. Many of the areas you enter in Sosaria are full of characters you can interact with and they will tell you clues you need to fulfill your quest. You must talk with everyone you meet and explore all the aspects of every area of Sosaria, even all the little out of the way places, to get the information you will need. Not everyone you meet will be a great intellect but it is better to be friendly. When you are on the surface of the world or in the dungeons you will constantly be accosted by evil forces such as skeletons, orcs, fighters, trolls and any other number of nasties. You must do battle with these bands of maniacs until all are killed. This portion of the game plays like mini-chess games as your 4 characters battle from 1 to several of your foes. You need to constantly monitor the health of your fighters and use the strong to protect the weak. Once the enemy is defeated you are left with a chest which you may open to reveal gold, weapons or perhaps a poison trap, so be careful! Through these battles you gain experience points and gold, both of which are necessary to advance the rank of your characters and gain them strength for the final combat of the game.

In case you haven't figured it out by now, these games are quite involved and it can take months to search the whole land and discover its many secrets. According to the manufacturer, you should be able to complete ULTIMA III in 75-100 hours, and I don't doubt it will take at least that long. The game package comes complete with 3 books filled with all you need to know to get you started, a reference card and a cloth map. Hint books are also available. And for those of you with a MIDI-equipped keyboard hook it up to the MIDI ports and type V after you arrive in Sosaria. Then all of the original music that the game plays throughout your quest will be played by the keyboard and all game sounds such as battle sounds and other effects will come out of your monitor speaker. If you don't type V you will also get music out of your monitor speaker but I prefer the Pianobell sound of my Yamaha DX-100.

If you have any doubt about letting this kind of game into your life by all means see a demo at your local dealer before you buy. You do not have to play ULTIMA I or II to play ULTIMA III. In fact, you can't buy I for your ST and II, offered for a time by Sierra On-line will be taken out of circulation for a while after current stock is gone. I picked up a copy for $10.00 at Toys 'R Us last fall during their brief time as an ST dealer. Ultima IV is slated for release any week now and I hope to do a review of it in the pages of ST World. The program is from Origin Systems and is now distributed by Electronic Arts.

A final note: this disk is copy protected and if you attempt to play a copy created by the usual sector copier you will not be allowed to buy any needed supplies in any of the stores in the villages. As the game tells you when you try, "honesty is a virtue" and the game is useless. You can use one of the programs such as Procopy to copy it but I'm uncertain of the results. I in no way encourage copying except for personal archival purposes, however with this game you need to be able to back up your player disk so you can save your position, power down, copy your disk and then reboot and continue on with the game. If you don't do this and then all your characters die just after you have saved them when you restart the game you will be at the same position with 4 dead characters and the program tells you it is time to reboot your system. At least if you have a backup copy you have not lost all. I talked to Origin this week and their programmers are thinking of offering the option of making a copyable player master disk. This is a must have option and was available for the 8-bit version of the game. Don't let this stop you from getting this great game, just drop Origin and Electronic Arts a line and let them know your feelings. I already told Origin.

For more information contact your local dealer or write Origin Systems, Inc., 340 Harvey Road, Suite No. 1, Manchester, NH 03103, phone 603-644-3360.

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AEGIS ANIMATOR

CONTINUED FROM PAGE 7

The interface between user and program is quite nice, with drop down menu's available as well as a "fast menu" with all commands represented on screen in a movable window which can also be erased if it gets in the way. A storyboard is provided which allows up to 6 separate animations to be viewed at once in small windows with cut and paste options allowed between all 6 windows. The manual is nice, well organized and quite complete in telling you all the terms and functions of the program but there needs to be more information added about cel animation and the "strips" concept (one of the features of the program). For the advanced animator the manual contains information about how to edit "script" files which are text files which tell the animation how to proceed. You can control all graphic elements using one of these script files and they allow absolute control over what happens in your animation.

To sum up, AEGIS ANIMATOR is a powerful graphics package that allows you to create fantastic animations if you are willing to put in the time to learn all the ins and outs of the program. Be sure to see a demonstration of it if you are interested to be sure it is the animation program for you. I still have a long way to go until my animations will be on Saturday morning T.V. but I'm making progress! Now all I need is a way to record the video output of my 1040ST onto a video recorder and a lot of practice with AEGIS ANIMATOR and I'll be all set. For more information contact Aegis Development, 2115 Pico Boulevard, Santa Monica, CA 98405, phone 213-392-9972. AEGIS ANIMATOR sells for $79.95.

PREVIEWS

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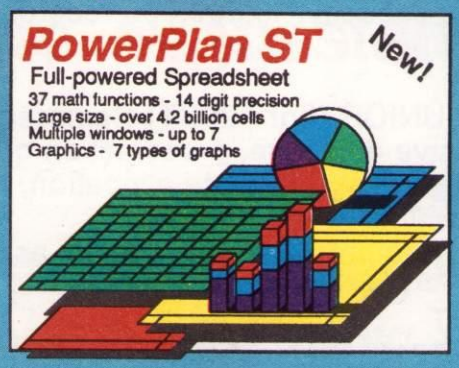
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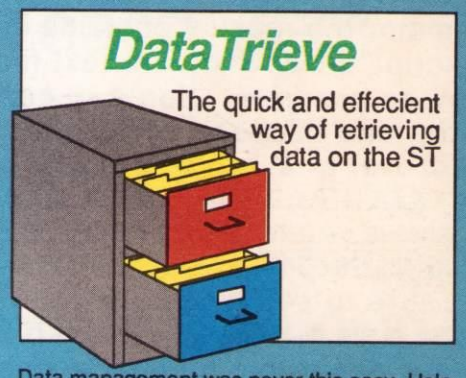

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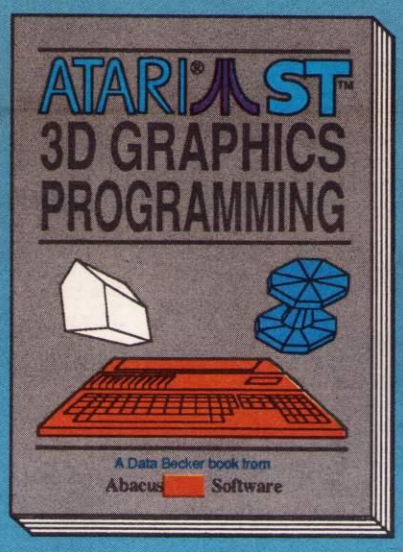

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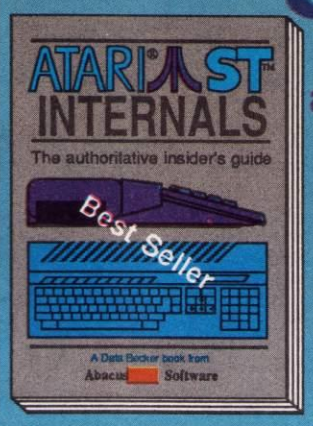

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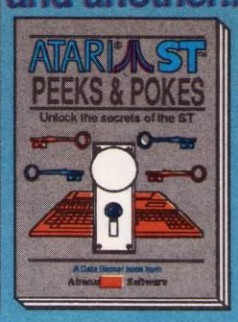

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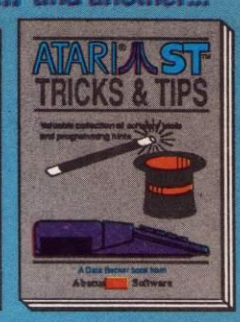

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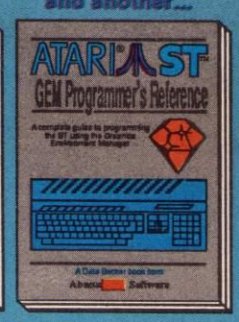

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